

have been applied exclusively to traditional wireline services and facilities;<sup>159</sup> the core assumption of the unbundling regime is access to the ILECs' telephone network.

In the *Triennial Review Order*, the Commission acknowledged that it was unaware of instances where CLECs could use cable facilities "as a means of accessing the incumbents' wireline voice-grade local loops" noting that cable telephony provides no "probative evidence of an entrant's ability to access the incumbent LEC's wireline voice-grade local loop and thereby self-deploy local circuit switches."<sup>160</sup> The inability to use the cable provider's facilities to reach the potential subscriber base, either via cable-provided last mile facilities or through use of cable-provided facilities to access ILEC last mile loop facilities, precludes CLECs from competing against the ILEC in the same area without access to the ILEC's switch. For CLECs seeking to provide POTS services, the existence of cable telephony does not eliminate their need to access the ILEC's switch in conjunction with the ILEC's voice-grade loop facilities.<sup>161</sup>

<sup>159</sup> *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00-185, CS Docket No. 02-52, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798, ¶¶ 43-44 (2002) ("Cable Modem Declaratory Ruling") (citing *Independent Data Commun. Mfgs. Ass'n, Inc. Petition for Declaratory Ruling that AT&T's InterSpan Frame Relay Service Is a Basic Service; and AT&T Petition for Declaratory Ruling That All IXCs be Subject to the Commission's Decision on the IDCMA Petition*, Memorandum Opinion and Order DA 95-2190, 10 FCC Rcd 17,167, n. 167 (1995)). By "wireline," the Commission stated that it was referring to services provided over the infrastructure of traditional telephone networks.

<sup>160</sup> *Triennial Review Order* ¶ 446.

<sup>161</sup> *Id.* ¶¶ 228-29, 245.

The availability of cable telephony offerings is evidence that facilities-based mass market competition is possible *only* if an entity deploys both its own switch and its own loop.<sup>162</sup> Because cable telephony does not need to use the ILEC loop, and therefore can avoid the operational problems inherent in using the ILEC loop in conjunction with competitive switch (for example, the hot cut problems described in Section III.G.2), the existence of local competition via cable telephony says nothing regarding the impairment facing CLECs that must use the ILEC loop to access subscribers. The Commission appeared to understand this when, in the *Triennial Review Order*, it concluded that competition from cable telephony “only serves as evidence of entry using both a self-provisioned loop and a self-provisioned switch.”<sup>163</sup>

Significantly, if the Commission concludes that the presence of cable providers is justification for a finding of “no impairment” in the local switching market, the same conclusion regarding impairment must be reached with respect to loops, because, as stated above, cable providers do not use either ILEC loops or switches to provide cable telephony services.

**G. Given The Limited Existence Of Competition In The POTS Market, The Commission Must Look At Whether CLEC’s Can Economically And Operationally Enter The Marketplace.**

The standards and unbundling obligations embodied in the 1996 Act were “designed to create incentives for both incumbents and competitive LECs to innovate and invest in technologies and services that will benefit consumers through increased choices of telecommunications services and lower prices.”<sup>164</sup> Yet, CLECs still face numerous barriers to entry, both economic and operational, that the ILECs avoid as a result of a legacy network

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<sup>162</sup> *Id.* ¶ 445.

<sup>163</sup> *Id.* ¶ 446 (citations omitted).

<sup>164</sup> *UNE Remand Order* ¶ 5.

architecture. ILEC dominance of the local market is not an earned advantage – it is the result of decades of government protection and will require years of effort, by both entrants and the Commission, to supplant it with a competitive environment.

Last year in the *Triennial Review Order*, the Commission acknowledged that economic barriers to entry still are present in the POTS market. “[W]hether entry will be economic,” the Commission noted, “depends critically on the values of certain factors affecting a competing carrier’s likely costs and revenues.”<sup>165</sup> The Commission further stated that “[b]ecause economic entry depends on whether the sum total of all likely revenue sources exceeds the sum total of all likely costs of serving the market, any factor that limits or lowers the potential revenues available to a competing carrier, or raises the costs of serving a set of customers, is a potential barrier to entry.”<sup>166</sup> As such, the Commission conceded that POTS market competition only will be economically feasible “in locations served by larger wire centers with greater line density, and in areas with low UNE loop rates, high retail rates relative to cost, high subscription rates for vertical features, large numbers of business customers, low UNE rates, and high retail rates.”<sup>167</sup> If the Commission ends the ILECs’ obligation to provide unbundled access to local switching at TELRIC rates, the economic criteria necessary for CLECs to enter and serve POTS customers will be eliminated. Without the current unbundling regime and mandated unbundled access to the ILEC’s switch at cost-based rates, competition in the POTS market will dissolve.

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<sup>165</sup> *Triennial Review Order* ¶ 484.

<sup>166</sup> *Id.* n. 1497.

<sup>167</sup> *Id.* n. 1499.

1. *The economic barriers to entry in the POTS market are insurmountable by CLECs without access to the ILEC's switch.*

For there to be meaningful competition in the POTS market, CLECs must be able to access the ILEC's facilities, most importantly, the subscriber's loop in a commercially meaningful way. The ILEC loop network represents the cumulative product of decades of monopoly control, the unique advantages of incumbency (such as eminent domain), and cross-subsidy from other services, including interstate access service. Fundamentally, the reason that CLECs require access to unbundled local switching is because unbundled local switching is the only commercially viable means to access the inherited loop network in the POTS market. Because the ILEC network was designed to inefficiently aggregate loops for a multi-carrier environment – that is, it is comprised of a large number of small wire centers and it uses loop termination technology (the MDF) that was not designed for loops to be routinely rearranged between networks – the only way to enable competitive POTS services is by leasing capacity in the existing switches. By leasing capacity in the existing switches, access to the loop network can be achieved electronically, and the fact that the ILEC network has “too many switches/too few loops” is rendered irrelevant.

Furthermore, requiring CLECs to deploy yesterday's technology in order to mirror the ILEC's historical circuit-switched network is not sound public policy. The Commission, as required by the 1996 Act, should encourage the deployment of new technologies in furtherance of advanced services. It should not set policies that force CLECs to deploy old technologies that are already well established, and where duplication offers no inherent competitive advantage. As demonstrated above, mass market local competition relying on competitively-provided switching is insignificant and declining, and there is simply no reason to

expect that it will expand in the future. The competitive switch-based experiment has already failed in the POTS market, and what legacy activity remains is decaying rapidly.<sup>168</sup>

If the Commission were to remove the switch unbundling obligations of the ILECs, competitive carriers would have to start from scratch and build an overlay POTS network to compete against the ILEC. In the *Local Competition Order*, the Commission noted that the ILEC's legacy network "enables it to serve new customers at much lower incremental costs than a facilities-based entrant that must install its own switches, trunking and loops to service its customers."<sup>169</sup> To reduce the impact of these advantages on new entrants, Congress attempted to eliminate the significant economic impediments to efficient entry by allowing new entrants multiple avenues for competing: "the construction of new networks, the use of unbundled elements of the incumbent's network, and resale."<sup>170</sup> The Commission acknowledged that some new entrants may "follow multiple paths of entry as market conditions and access to capital permit," and it expressed no preference as to which entry method competitive carriers should employ.<sup>171</sup> The important point was to "ensure that all pro-competitive entry strategies may be explored."<sup>172</sup>

In the *UNE Remand Order*, the Commission acknowledged that many economic barriers to entry CLECs face when attempting to self-provision switches to serve the POTS

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<sup>168</sup> The PACE Coalition, *The UNE-P Fact Report: May 2004 – Lessons from the State TRO Proceedings* at 2-3, available on line at [http://www.pacecoalition.org/une-p\\_report\\_5\\_2004.pdf](http://www.pacecoalition.org/une-p_report_5_2004.pdf). ("UNE-P Fact Report"). Attached hereto as Exhibit 27.

<sup>169</sup> *Local Competition Order* ¶ 10 (citing to *Local Competition NPRM* ¶ 6).

<sup>170</sup> *Id.* ¶ 12.

<sup>171</sup> *Id.*

<sup>172</sup> *Id.*

market still existed despite unbundling obligations. Among these barriers was “the cost of collocating in an incumbent LEC’s central office” in order to access the local loop plant for the last mile facilities needed to serve subscribers.<sup>173</sup> Collocation costs include both recurring and non-recurring costs for obtaining the physical connection to the ILEC’s loop as well as the cost associated with being physically present in the ILEC’s central office. As discussed below, collocation equipment is expensive and CLECs must incur significant costs when acquiring collocation facilities to locate in the ILEC’s central office.

Collocation costs are not the only costs CLECs must absorb before competing against the ILEC. There is the cost of acquiring and deploying a switch, which is cost prohibitive without an embedded customer base (which is only possible with unbundled access to the ILEC’s switch). And, as discussed below, CLECs also must incur the costs of transporting their traffic from each of the ILEC’s central offices where their customers are located to their switch, a cost often inflated by the ILEC well above the costs it incurs to provide the transport.<sup>174</sup> Furthermore, CLECs must incur the monthly operational costs of providing the services to its subscribers on top of the transport costs and the already sunk costs of switch deployment and collocation. Continuing the unbundling obligations helps to eliminate some of the economic barriers to entry, thereby making it feasible for CLECs to enter and compete in the POTS market.

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<sup>173</sup> *UNE Remand Order* ¶¶ 262-64.

<sup>174</sup> *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket Nos. 01-338, 96-98, 98-147, AT&T ex parte, at 4 (filed Dec. 29, 2002) (“*AT&T Brenner Decl.*”). Furthermore, if the ILECs are successful in eliminating unbundled transport as a section 251(c)(3) UNE, CLEC transport costs could dramatically increase.

- a. Deployment of competitive switches to serve the POTS market requires concentration in order to overcome the ILEC's legacy network design.

Deploying competitive switching facilities to serve the POTS market only makes economic sense where a CLEC has sufficient line concentration to cover the costs it must incur during deployment. As the Commission noted in the *UNE Remand Order*, CLECs will continue to "incur a materially greater cost when self-provisioning switching at low penetration levels,"<sup>175</sup> than the ILEC incurs. Without penetration, deployment of a self-provisioned switch is uneconomical for CLECs.

In addition to the costs of deploying a switch, CLECs must overcome the inherent deficiencies resulting from the architecture of the ILEC's legacy network. The ILEC network was designed to support one monopoly service provider. It was therefore constructed to allow the ILEC to hard wire its loops to its switches and utilize software programs in cases where a customer moves throughout its network. This network architecture did not provide the flexibility of rerouting the loop to a different, non-ILEC, switch. Furthermore, the ILECs' network was designed and built upon analog technologies, with signals that degrade over distance. As a result, the ILECs have deployed numerous switches throughout their network in order to avoid drops in service quality. For a CLEC to compete against the ILEC in this type of network structure using a non-ILEC switch, the CLEC would be required to incur the costs associated with transporting traffic from *each* of the ILECs' central offices in which it has customers to its switch. The more remote a customer's location, the higher the costs of transporting the traffic back to the CLEC's switch. In addition, to have the ILEC connect the subscriber's loop to the

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<sup>175</sup>

*UNE Remand Order* ¶ 261.

CLEC's switch, the CLEC must incur both collocation costs and hot cut costs (discussed in detail below) for each central office associated with its customer.

A CLEC cannot, regardless of how limitless its resources are, duplicate the ILEC legacy network. First, CLECs can never achieve the economies of scale the ILECs have enjoyed as monopoly providers. Second, it is nearly impossible for CLECs to minimize loop distances in order to avoid degrading signals. Deployment of a switch in each central office to avoid signal degradation is not even remotely economically feasible as there are nearly 14,000 ILEC central offices throughout the country.<sup>176</sup> The Commission has acknowledged the conundrum CLECs are in, noting that in order for a CLEC to backhaul circuits to its switch in order to avoid installing switches in each central office "effectively requires competitors to deploy much longer loops than the incumbent."<sup>177</sup> Consequently, a CLEC must incur the costs of the ILEC transporting its traffic back to the CLEC switch. As such, competitive carriers can only serve a fraction of the subscribers possible by the ILEC on the legacy network.

- b. Costs associated with the deployment of a competitive switch impair entry in the POTS market.

In the *UNE Remand Order*, the Commission acknowledged that there were significant costs associated with the deployment of a competitive switch.<sup>178</sup> These costs continue to apply today. The ILECs continue to enjoy scale advantages over CLECs in provisioning and operating switches in the POTS market. As the Commission noted in the *UNE Remand Order*, CLECs "encounter generally greater direct costs per subscriber when provisioning their own

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<sup>176</sup> *AT&T Brenner Decl.* ¶ 63 (citing *Leshner-Frontera Decl.* ¶ 33).

<sup>177</sup> *Triennial Review Order* ¶ 480.

<sup>178</sup> *See UNE Remand Order* ¶¶ 259-66.



switches, particularly in the early stages of entry when [competitive] carriers may not have the large number of customers that is necessary to increase their switch utilization rates significantly.”<sup>179</sup> The Commission concluded that while the scalability of the switch mitigates these costs, it does not “eliminate the incumbent LEC’s scale advantages and reduces, but does not eliminate competitor’s sunk costs and entry barriers.”<sup>180</sup>

For a CLEC to justify the costs of deploying a switch, the CLEC must be able to fill the switch with sufficient lines and traffic of paying customers to generate the revenues needed to recover these high fixed costs.<sup>181</sup> In the Commission’s *Triennial Review Order*, little data was available concerning actual levels of mass market competition occurring without use of the ILEC’s switch (*i.e.*, UNE-L). The data voluntarily provided by the ILECs before state commissions conclusively demonstrates, however, that there is no meaningful mass market competition using UNE-L, even in those “most competitive” markets where the ILECs claim the mass market switch triggers were satisfied.<sup>182</sup>

The levels of competitive activity disclosed by the ILECs validate the significant entry barriers that prevent the emergence of UNE-L based mass market competition. These figures also demonstrate that CLEC switches are underutilized, driving switch costs to provide POTS higher than the ILEC’s costs.<sup>183</sup> In fact, testimony filed before the Kansas Corporation

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<sup>179</sup> *Id.* ¶ 260.

<sup>180</sup> *Id.*

<sup>181</sup> *Direct Testimony of Robert J. Kirchberger and E. Christopher Nurse on behalf of AT&T*, PA PUC Docket No. I-00030099 at 78 (Jan. 9, 2004) (“*Kirchberger and Nurse PA Direct*”). Attached hereto as Exhibit 28.

<sup>182</sup> *See supra* Table A; *see also* The Pace Coalition, *UNE-P Fact Report*, at 1-2.

<sup>183</sup> *AT&T Brenner Decl.* ¶ 78.

Commission in its *Triennial Review Order* proceeding illustrates this point. In two of the MSAs identified by SBC as satisfying the impairment standard, testimony showed that CLECs incurred costs on average of \$12.14 more per line using UNE-L than the ILEC incurred serving lines in the same service territory.<sup>184</sup> These costs do not include the costs associated with leasing the loop which, although available at TELRIC rates, are higher than the ILEC's loop costs. In addition, SBC submitted similar information regarding the cost disadvantages faced by CLECs in the *Triennial Review Order* proceeding. Citing to a series of costs that CLECs might incur serving the mass market using UNE-L, including hot cuts, collocation, and transport costs for the three states that SBC analyzed, *i.e.*, California, Michigan and Texas, SBC developed estimated cost differentials that totaled respectively \$10.74, \$10.88, and \$10.74 per line for these cost components for a central office in which a CLEC would serve 250 lines; and \$9.00, \$7.85, and \$8.80 per line, respectively, for these cost components for a central office in which a CLEC would serve 500 lines. These average figures demonstrate a significant economic barrier faced by CLECs when attempting to compete in the POTS market using UNE-L.<sup>185</sup>

CLECs must aggregate substantial quantities of loops from multiple central offices in order to justify the costs of switch deployment and attempt to overcome the economic disadvantage they face serving POTS customers.<sup>186</sup> This process requires the CLEC to incur significant costs of transporting the traffic back to its own switch, particularly in instances where

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<sup>184</sup> Direct Testimony of Steven E. Turner, on behalf of AT&T Communications of the Southwest, Inc., TCG Kansas, Inc., and Birch Telecom of Kansas, Inc., Docket No. 03-GIMT-1063-GIT, at 37 (filed Jan. 30, 2004). Attached hereto as Exhibit 29.

<sup>185</sup> The Joint Commenters do not agree that the data SBC presents currently represents the line counts required to establish a collocation arrangement.

<sup>186</sup> *Kirchberger and Nurse PA Direct* at 79, Exhibit 28.

the customer is located a substantial distance from the CLEC's switch. Transport is expensive, but avoided by the ILECs whose loops terminate at their switch.

The costs associated with the actual deployment of the switch and the costs associated with transporting traffic to the CLEC's switch, are coupled with the cost of collocating in the ILEC's central office. This cost includes the cost of the collocation equipment and the physical collocation space, both of which are cost prohibitive without a sufficient customer base over which to spread the costs. As the Commission noted, establishing collocation is a costly process.<sup>187</sup> In particular, nonrecurring collocation costs can be as much as \$500,000 for collocation in a single central office.<sup>188</sup> These costs have not decreased over the last several years. With nearly 14,000 central offices across the county, and CLECs needing a collocation arrangement in multiple central offices, the collocation costs alone are prohibitive. This does not even take into consideration the costs of acquiring, installing, and maintaining the collocation equipment or the transport needed to take traffic from the ILEC's network over to the CLEC's network (as described below). Given the timeframes associated with building out a collocation arrangement and the costs of collocation, especially considering the fact that these costs are coupled with the costs associated with acquiring and maintaining a customer, CLECs providing POTS services cannot realize the necessary profit margins to make competing against

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<sup>187</sup> *UNE Remand Order* ¶ 263.

<sup>188</sup> *Id.*

the ILEC justified<sup>189</sup> without the necessary levels of market penetration made possible only as a result of unbundled access to the ILEC's switch.

Further, even with a self-provisioned switch, CLECs still require access to the ILEC's switch in instances where the customer they seek to serve is outside their collocation footprint, or to serve customers with multiple locations throughout the ILEC's service territory. For example, a customer with multiple locations within an area may only need a few voice-grade lines. As such, it would not be economical for the CLEC to incur the costs of deploying a loop to serve that customer. In those instances, competitive carriers must rely upon the ILEC's existing network – including its switch – to serve the customer.<sup>190</sup> Otherwise, it simply is not economically feasible to provide service to the potential customer.

- c. Transport backhaul costs are significant impediments to the use of a competitive switch to serve widely dispersed POTS customers.

The costs for a CLEC to backhaul, or to extend a subscriber's loop beyond the point where it had connected the ILEC's switch to the CLEC switch, are significant, especially to serve widely dispersed POTS customers. During the Commission's investigation that resulted in the *Triennial Review Order*, carriers indicated that backhaul costs were over \$100.00 per line.<sup>191</sup> As the Commission is aware, the ILEC's legacy network architecture was designed to support a

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<sup>189</sup> *Direct Testimony of Rebecca H. Sommi on behalf of the CLEC Coalition*, PA PUC Docket No. I-00030099, at 8 (Jan. 9, 2004) ("*Sommi PA Direct*"). Attached hereto as Exhibit 30.

<sup>190</sup> *Sommi PA Direct* at 9.

<sup>191</sup> *See, e.g., AT&T Brenner Decl.* ¶ 80 (citing Affidavit of C. Michael Pfau, CC Docket 96-98 (filed May 25, 1999) estimating AT&T's costs to be approximately \$100 per loop). *See also id.* (citing PACE/Birch ex parte, CC Docket 96-98 (filed Aug. 16, 2001) (estimating Birch's costs to be approximately \$144 per loop)).

single service provider; it was not designed to support multiple entities providing service to end user customers. The legacy network essentially hard-wired the connection between ILEC subscriber loops and the ILEC switch, without the expectation that loop rearrangements to multiple networks would need to be routine. The legacy network structure results in significant costs to CLECs when they attempt to connect the same loop with their switch.<sup>192</sup> This includes the costs of “installing equipment in the wire center in order to digitize, aggregate, and transmit the voice traffic, and paying the incumbent to transport the traffic to the competitor’s switch.”<sup>193</sup> If permitted to impose special access prices for transport, this cost disparity would increase even further.<sup>194</sup> Given the widely geographically dispersed nature of the customers typically served by POTS service providers, these CLECs must aggregate loops from multiple central offices and bring the traffic back to their own switch.<sup>195</sup> In essence, the CLEC must create an overlay network infrastructure that is largely dedicated to the subset of POTS customers wooed away from the ILEC.

2. *Existing ILEC hot cut procedures pose a substantial barrier to entry.*

Current ILEC hot cut procedures, which vary by ILEC and by state, pose substantial barriers to entry for competitive carriers. The court in *USTA II* did not preclude the Commission from taking hot cut problems into account when conducting its impairment analysis. In *USTA II*, the court questioned the Commission’s national finding of impairment for

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<sup>192</sup> *Triennial Review Order* ¶ 465 (“the incumbent LECs’ networks were designed for use in a single carrier, non-competitive environment”).

<sup>193</sup> *Id.* ¶ 480 (citations omitted).

<sup>194</sup> *AT&T Brenner Decl.* ¶ 81.

<sup>195</sup> *Kirchberger and Nurse PA Direct* at 76-79, Exhibit 28.

mass market switching because the court believed that the Commission had conceded that hot cuts were not problematic nationwide.<sup>196</sup> As an initial matter, the Commission did not concede that operational barriers due to hot cuts were not present throughout the country. Furthermore, carriers must use hot cuts for every single conversion to their own switch. Although ILEC hot cut processes vary to some degree, all processes suffer from the same infirmities. That is, there are not sufficient and workable procedures in place to transition customers in a cost-effective, timely manner without potential service disruptions. As such, to satisfy *USTA II*, the Commission should reaffirm that hot cuts are an operational impairment nationwide.

In the *Triennial Review Order*, the Commission correctly found that the high non-recurring costs of hot cuts, service disruptions associated with the process, and the ILECs' inability to handle large volumes of hot cuts created substantial economic and operational barriers to entry for competitive carriers. Indeed, the Commission concluded that these "hot cut barriers not only make it uneconomic for competitive LECs to self-deploy switches specifically to serve the mass market, but also hinder competitive carriers' ability to serve mass market customers using switches self-deployed to enterprise customers."<sup>197</sup> CLECs still encounter substantial economic and operational barriers due to the hot cut process. ILECs still do not have workable procedures in place for performing single hot cuts, bulk hot cuts, or batch hot cuts, upon carrier requests. Furthermore, the costs of performing hot cuts in the majority of the states are so cost prohibitive, particularly in light of typical customer churn levels, that it is not cost efficient for a CLEC to serve mass market customers using its own switch. State hot cut

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<sup>196</sup> *USTA II*, 359 F.3d at 464-75.

<sup>197</sup> *Triennial Review Order* ¶ 459.

procedures do not ameliorate or sufficiently address these issues so as to mitigate or curtail the impairment CLECs encounter.

- a. ILECs cannot perform the large numbers of hot cuts that would be necessary if the Commission were to eliminate unbundled local switching.

Even if the hot cut processes worked effectively, which they do not, for the number of hot cuts CLECs request today, the ILEC processes and systems are wholly inadequate to handle the large number of cutovers that would be necessary if the Commission eliminated local switching as a section 251(c)(3) UNE.<sup>198</sup> There is no evidence that the hot cut process is scalable. In other words, if the Commission were to eliminate mass market switching as a section 251(c)(3) UNE, it is unlikely that ILECs could process the number of hot cuts that would be necessary. At least one ILEC, Verizon, has claimed that it simply will hire additional labor to perform the hot cuts. This is unworkable – and unrealistic – for a variety of reasons. As an initial matter, Verizon currently has an *industry-wide* limit on the number of hot cuts (only 150 lines) that it will provision per central office per night. Therefore, Verizon, by its own terms, has limited the number of lines that it will hot cut per night.<sup>199</sup> If the Commission were to eliminate unbundled local switching, ILECs would need to increase the minimum number of hot cuts substantially; otherwise, as a practical matter, ILECs simply cannot convert the number of lines served by UNE-P to an ILEC within a realistic time frame.

ILECs do not have the resources available to perform the large number of hot cuts that would be necessary if the Commission were to eliminate unbundled local switching. At

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<sup>198</sup> See *id.* ¶ 422.

<sup>199</sup> Affidavit of Michael Hou ¶ 10 (provided as Attachment B) (hereinafter “Hou Aff.”).

least one ILEC's—Verizon—is to hire more people. There is no basis to assume, however, that Verizon easily will find sufficient untapped labor with the knowledge and training necessary to process these hot cuts in an efficient manner, or that the number of lines served by CLECs realistically could be cut over to the CLECs' switch before the Commission eliminates unbundled local switching. Hiring temporary employees – who know that they will be temporary – potentially compromises the hot cut procedures. These employees would be performing critical customer service functions affecting hot cuts and migrations, but may not have the incentive or the motivation to provide the necessary detail to the task at hand.

Currently, CLECs do not have access to workable systems such that they can submit their orders electronically and follow those orders through to completion. The lack of electronic processing leads to delays and errors in the hot cut process. Indeed, only one ILEC, Verizon, even has a partially automated hot cut procedure, referred to as the Wholesale Provisioning Tracking System (“WPTS”). Even Verizon's WPTS, however, needs improvement. As the FCC stated in the *Triennial Review Order*, “[t]he hot cut process is a largely manual process....”<sup>200</sup> As a result, the process is labor intensive. Although ILECs recently have made some proposals for changes in their processes, for example, in response to the Commission's mandate in the *Triennial Review Order* that ILECs develop a batch hot cut process,<sup>201</sup> the ILEC hot cut processes remain largely manual.<sup>202</sup> As a result, the delays and the impediments that the Commission found in the *Triennial Review Order* continue today.<sup>203</sup>

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<sup>200</sup> *Triennial Review Order* n. 1409.

<sup>201</sup> *Id.* ¶ 460 (directing the state commissions to approve a batch cut process within nine months of the effective date of the order).



Putting aside all of these obstacles to completing the hot cut process, there are some scenarios when the hot cut process simply is not available. In state proceedings held in response to the *Triennial Review Order*, carriers submitted testimony showing that the hot cut process is not ubiquitously available. For example, Broadview Networks explained that some end user customers purchase services, such as off-premise extensions, that are not supported by the hot cut process.<sup>204</sup> Each of the obstacles that the Commission found existed at the time of the *Triennial Review Order* remain in place today and pose significant barriers to entry to competitive carriers.

**IV. THE COMMISSION MUST ADOPT TRANSITION STRATEGIES THAT RECOGNIZE THAT IMPAIRMENT DIMINISHES GRADUALLY AS CLECS INCREASE SCALE.**

There is little question that the 1996 Act was intended to disrupt existing telephone markets, bringing the benefits of competition to traditional, circuit-switched phone users (*i.e.*, POTS customers), and to encourage the deployment of new technologies. For the Commission to accomplish both objectives, it must recognize the impairments that frustrate entry into each market, and establish unbundling and transition policies that remove those barriers. As explained above, POTS competition is a critical prerequisite to advanced services competition, as well as being mandated by the 1996 Act. If the Commission eliminates local switching as a

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<sup>202</sup> See, e.g., *Proceeding on Motion of the Commission to Examine the Process and Related Costs of Performing Loop Migrations on a More Streamlined (e.g., Bulk) Basis*, New York Public Service Commission Case 02-C-1425, Order Setting Permanent Hot Cut Rates, at 3 (Aug. 25, 2004) ("*New York Hot Cut Order*") (establishing rates for hot cuts and stating that "the central office wiring activities of the hot cut process are inherently manual..."). Attached hereto as Exhibit 32.

<sup>203</sup> See Hou Aff. ¶ 6.

<sup>204</sup> See *Sommi PA Direct* at 11, Exhibit 30.

section 251(c)(3) UNE without properly removing the underlying impairment—and without adopting a transition mechanism to permit carriers and customers to adjust—then the fundamental goals of the 1996 Act will be in jeopardy.

This section addresses three key areas. First, the Joint Commenters explain the important role played by unbundled local switching to enable an entrant to build the density necessary to justify facilities deployment. Second, the Joint Commenters recognize that the 1996 Act did not place density above ubiquity as a competitive objective and, as a result, the impairments faced by a “universal competitor”—that is, a competitor committed to widespread entry—are just as important to appreciate and address as those effecting carriers attempting to build subscriber density in more limited locations. Finally, even in those instances when the Commission adopts a general finding of non-impairment, it must implement that finding through appropriate transitional rules that enable carriers and customers to adjust to changing conditions, as well as adopt exceptions to that finding where unique circumstances (such as the incumbent’s inability to provide suitable facilities) preclude the commercial use of alternative local switching. The transition plan that the Commission adopted in the *Triennial Review Order*—which neither was challenged by the ILECs nor criticized by the Court in *USTA II*—provides the appropriate foundation, with modest adjustment, for such a plan.

**A. New Entrants Require Density To Justify Facility Construction.**

The costs to collocate facilities needed to concentrate analog loops in a wire center and backhaul those loops to a CLEC switch location are a fundamental impairment confronting entrants attempting to offer POTS services using self-provisioned local switching. These additional costs are sensitive to the number of revenue-producing loops an entrant will have in a particular wire center. As a result, a CLEC generally cannot deploy alternative

facilities to serve customers in a wire center until it has achieved a threshold density in that wire center.

Although collocation and backhaul costs generally create a barrier to entry into the POTS market that qualifies as impairment, there may be instances where carriers are able to achieve line concentrations that justify collocation. In the experience of the Joint Commenters, collocation is appropriate in those wire centers where an entrant can expect to terminate the lowest-level of optical capacity, an OC-3. This conclusion is consistent with evidence in the enterprise market, where there are some switch-based competitive offerings requiring collocation and backhaul.<sup>205</sup> Even in the enterprise market, however, carriers generally do not collocate facilities at capacity less than OC-3 levels.

Unbundled local switching enables carriers to gain a sufficient foothold in a market to justify the collocation of facilities. Assuming a 70% fill rate, an OC-3 facility is not cost-justified until a carrier has a base of approximately 1,500 lines in a wire center. Creating such a base of customer lines, even for a carrier with a business plan to rapidly build density,<sup>206</sup> takes time and the availability of unbundled local switching gives a carrier that time, enabling it to build that base and expand its network rationally.

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<sup>205</sup> As the Commission already has recognized, the enterprise market is composed of those medium and large business customers that demand sophisticated telecommunications services using DS1 capacity loops (and above) that are willing to sign annual or term commitments, *Triennial Review Order* ¶ 452. Because of this, the enterprise market is less sensitive to the provisioning issues that frustrate mass market competition and the principal impairments that must be overcome concern the costs of collocation and backhaul.

<sup>206</sup> Not all business plans are founded on the goal of rapidly gaining customer density in particular wire centers. Some competitors are focused on a “universal competition” strategy, hoping to establish a broad customer base across the same geographic footprint as the incumbent.

Although an economically precise density-based impairment finding would require an analysis of cost factors peculiar to each state and city, the requirements of *USTA II* can be satisfied by a more simplified approach. Specifically, the Commission could reach a mass market switching impairment finding that would apply until a CLEC has acquired 1,500 lines in a particular wire center.<sup>207</sup> Once a carrier has achieved this density, the transition plan that the Commission adopted in the *Triennial Review Order* (as refined in Section IV.C below) would apply.

The advantage of this approach is that it tracks customer density, which is a key impairment that otherwise would discourage facilities deployment. While the ILEC effectively inherits its density from its decades of monopoly (and the government protection that enforced that monopoly), the competitive entrant must have time to build its density, and must do so in an environment of virtually unconstrained competitive response by the ILEC (such as winback).<sup>208</sup> A density-based impairment rule would provide CLECs with the opportunity to build the requisite customer base, thereby facilitating additional facilities-based competition.

In addition, by permitting carriers to lease unbundled local switching to serve customers in wire centers where the threshold density has not been achieved, carriers will be able to more effectively meet customer needs more efficiently (including enterprise customers) and

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<sup>207</sup> 1,500 lines represents the lower bound of any line-density needed to justify facilities deployment. The reality is there are a wide range of factors—such as high collocation costs, limited right-of-way access to the central office, high construction costs, lower than expected retail revenues—that would all tend to increase the minimum size needed for collocation. The Commission’s waiver process could be used to address more specific information.

<sup>208</sup> For instance, BellSouth admits that its winback percentage in the business market is 75 %. See Direct Testimony of BellSouth witness Albert J. Blackmon, North Carolina Docket No. P-55, Sub. 1013, at 4 (July 1, 2004). Attached hereto as Exhibit 33.

operate their businesses in a more efficient manner. For instance, a predominately facilities-based CLEC with a network in downtown locations would be able to compete for a customer's entire account by serving some locations over its own facilities and others using unbundled local switching. Similarly, a carrier that serves only enterprise customers with its own facilities could broaden its competitive focus – thereby recovering its common costs over a broad customer base like the ILEC,<sup>209</sup> and establishing a reputation with “pre-digital” customers that can be used to market more sophisticated services in the future.<sup>210</sup> Both results further the interests of facilities-based competition.

**B. The “Universal-Competitor Strategy” Prioritizes Ubiquity Over Density.**

Although the line-density rule described above matches impairment to unbundling for those carriers focused on building density in a relatively few areas, there are other equally legitimate business strategies that it does not consider. Specifically, the rule does not take into consideration the impairment faced by those carriers whose business strategy is to be a “universal competitor” to the ILEC, offering service across the same broad geographic footprint

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<sup>209</sup> Although the Commission frequently focuses on the importance of shared *network* costs, CLECs also incur significant joint marketing, customer support and administrative costs that must be recovered from as many lines of business as possible. One use of unbundled local switching is that it enables a facilities-based CLEC to compete in areas, and for customers, that would otherwise be unreachable, thereby providing a larger base over which common costs may be recovered.

<sup>210</sup> It is important to appreciate that CLECs do more than simply offer enterprise services to enterprise customers – they are also very active in facilitating the customer's shift from analog to digital services. By constantly introducing new and lower priced high-speed digital services, CLECs are disproportionately responsible for helping move the “digital divide” deeper into the market. This role, however, is greatly assisted when the CLEC is able to offer both analog and digital services, thereby creating its own base of analog customers to whom it can continue to market more sophisticated digital products. This is an important function that the Commission should encourage and which the line-density rule outlined above would promote.

as the incumbent. A CLEC whose strategy sacrifices density for ubiquity must overcome additional barriers to offer service broadly.<sup>211</sup> To address the unique impairment of this class of carrier, the Commission should require continued unbundling (subject to review in three years) in any state for any carrier meeting the line density threshold explained above if that carrier is operating, or is willing to operate, as an Eligible Telecommunications Carrier (“ETC”) over the same service territory as the BOC<sup>212</sup> in a state.<sup>213</sup> Such a rule would provide a window of certainty for CLECs bringing competitive benefits to customers without regard to density, while limiting unbundling to *only* those carriers willing to pursue geographically broad entry.

While facilities-deployment requires density, universal competition places a higher priority on expansion. It would be fundamentally inappropriate for the Commission’s unbundling analysis to reverse congressional priorities by adopting unbundling rules that favor density over ubiquity. As the Joint Commenters explained above, the availability of unbundled local switching has enabled carriers to begin to realize Congress’s goal of widespread competition. Entrants using unbundled local switching have expanded their offerings beyond the

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<sup>211</sup> As explained, such carriers are pursuing precisely the type of widespread entry strategy that Congress hoped for when it passed the Act. Consequently, in conduct its impairment review, the Commission must consider the additional impairment that carriers encounter pursuing broad entry.

<sup>212</sup> By this recommendation, the Joint Commenters only are addressing ETC requirements and unbundling obligations of the RBOCs. Rural independent companies present unique ETC issues and generally have not seen POTS competition through access to unbundled local switching. As such, the territories of the rural ILECs are unaffected by the recommendations herein.

<sup>213</sup> Specifically, the qualifying standard for this impairment rule should be that the CLEC must petition and qualify as an ETC for the entire statewide service territory, both rural and non-rural areas, of the ILEC offering unbundled local switching. The CLEC must receive this certification within the first seven of the initial nine-month transition period specified in the *Triennial Review Order*, as refined herein.

urban core to serve customers throughout entire states, including high-cost, low density exchanges.<sup>214</sup>

Importantly, universal competition is possible only because of the universal availability of unbundled local switching. With statewide availability, entrants are able to recover costs from the blend of low cost and high cost areas. If unbundled local switching were available only to universal competitors in high cost areas, the entry strategy would fail for several reasons.

First, the advertising media (television and newspapers) that reach most rural areas are not specific to those rural communities, but typically originate in a (reasonably nearby) urban market. Significantly, the cost to use television or print media is a function of the total population reached. As a result, mass market competition must address large markets that include urban centers to be cost effective.<sup>215</sup>

Second, the reason rural areas are considered rural is that no significant customer base resides there. For a CLEC to be able to expand its service to rural communities, it must have a preexisting market where it already is able to compete. There is no evidence that rural-only business strategies are viable, given the size of these areas. To reach minimum efficient

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<sup>214</sup> Exhibit 21 is a compilation of various geographic profiles from state *Triennial Review Order* proceedings documenting the existence of universal competition flowing from the availability of unbundled local switching.

<sup>215</sup> Consider the absurdity of an approach where a CLEC attempted to offer service to rural areas surrounding Atlanta, Georgia, but was precluded from offering its services in Atlanta itself. It would be impossible to advertise such an offering using Atlanta media, but constantly explaining “not available in Atlanta” or “prices significantly higher in Atlanta,” or “service may be accompanied by an outage if ordered in Atlanta.”

scale, the CLEC must have the same opportunity as the incumbent to compete in the much larger urban/suburban market.

Third, rural areas would present an impenetrable entry barrier if carriers are required to serve these areas on a stand-alone basis. Not only are the markets small, but also the costs to serve these lines are significantly higher. Exhibit 34 compares the deaveraged UNE loop rate between the urban (lowest cost) zone and the rural (highest) cost zone in each state. As Exhibit A demonstrates, UNE loop rates are dramatically higher in the rural zones in nearly every state, except for a handful of states that either have cost characteristics, or have adopted zone-mapping policies, that minimize the cost differential between urban and rural markets.

Finally, CLECs incur significant retail-related overhead costs that must be recovered across the totality of their enterprise. If the ILEC in a state is able to recover its overhead costs across its base of urban and rural markets, a CLEC must have the same opportunity. It is difficult enough for CLECs to bring extended competitive choice to rural areas, absorbing the UNE cost differentials as shown by Exhibit 34. This competition is possible only because CLECs (like the ILEC) are able to recover most of their retailing overhead in lower cost zones, expanding to higher-cost areas based on the additional incremental cost of serving those rural markets. Eliminate the CLEC's ability to serve the urban market and the CLEC's *entire* cost would need to be recovered in rates charged rural customers, a pricing proposition directly at odds with existing public policy.<sup>216</sup>

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<sup>216</sup> Traditionally, rural rates have contributed less to the ILEC's common costs than rates in urban markets.



Notably, the Court in *USTA I* requires that the Commission consider this cost issue in its impairment analysis,<sup>217</sup> albeit under the false impression that competitors only are interested in competing with the ILEC in low-cost areas. Far from “treating the ILEC as a piñata,”<sup>218</sup> a CLEC attempting to provide universal competition requires the same ability to compete in both low cost and high cost areas as the incumbent because it faces the same problem of cost recovery in both low and high cost areas.

In finding that the CLECs' lack of access to each of the many elements “materially diminish[ed]” their ability to provide service, the Commission nowhere appears to have considered the advantage CLECs enjoy in being *free of any duty to provide underpriced service to rural and/or residential customers* and thus of any need to make up the difference elsewhere.<sup>219</sup>

The fundamental misconception of *USTA I* was that CLECs are uninterested in acting as “universal competitors” across the entire ILEC footprint. As universal competitors, these carriers have no “offsetting advantage” that would justify geographic limitations on UNE access.

To comply with *USTA I* and *USTA II*, the Commission must consider a limited impairment finding that recognizes the particular characteristics of the market. The Joint Commenters propose that the Commission find impairment and exempt from the line density rule described above, a distinct class of entrant – those carriers willing to be named as ETC for the entire statewide operating territory of the BOC from which they will lease unbundled local switching to serve mass market customers.

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<sup>217</sup> *USTA I*, 290 F.3d at 422.

<sup>218</sup> *USTA II*, 359 F.3d at 573.

<sup>219</sup> *USTA I*, 290 F.3d at 422 (*emphasis added*).